Serial Number: 10/738,499 Filing Date: December 16, 2003

Title: POWER SAVING IN A WIRELESS LOCAL AREA NETWORK

Assignee: Intel Corporation

### REMARKS

This responds to the Office Action mailed on October 20, 2005. Reconsideration is respectfully requested.

Claims 1-12 and 21-27 are amended, claims 13-20 have canceled without prejudice, and claims 28-39 are added; as a result, claims 1-12 and 21-39 are now pending in this application. Support for new claims 28-39 may be found in paragraphs 18, 26, and 27 of Applicant's specification. Specific support for the amendment to claims 5 and 11 may be found in paragraphs 24 and 25 of Applicant's specification.

# §101 & §112 Rejections of the Claims

Claims 1-27 were rejected under 35 U.S.C. § 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility. Claims 1-27 were rejected under 35 U.S.C. § 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility, one skilled in the art would not know how to use the claimed invention.

As amended, independent claims 1, 7, 21, 26 and 26 recite that buffered data is transmitted to a client node from a supporter node when there is buffered data available, and that a packet is transmitted to the client node from the supporter node indicating that no data is available when there is no buffered data. In view of this, Applicant submits that the rejections of claims 1-27 under 35 U.S.C. § 101 and 35 U.S.C. § 112, first paragraph has been overcome.

## §102 & §103 Rejection of the Claims

Claims 1-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by Krantz et al. (U.S. 2004/0153676). Claims 26 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Krantz et al.

Applicant's independent claims 1 and 21 and are directed to a method of operating a client node in a wireless network and a client node in which the client

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node transitions from a lower-power state to a higher-power state and transmits a wakeup notification message to a supporter node. The supporter node is responsive to the wakeup notification message to determine whether or not data is buffered for the client node. When there is buffered data for the client node, the supporter nodes transmits the buffered data to the client node. When there is no buffered data for the client node, the supporter node transmits a packet to the client node indicating no buffered data is available. As recited in claim 1, when there is buffered data for the client node, the supporter node transmits the buffered data and then transmits a packet at the end of the transmission of the buffered data to indicate that there is more buffered data available and that the transmission of the buffered data is complete. Applicant's independent claims 7 and 24 are directed to the supporter node and the method performed by the supporter node. Independent claim 26 is directed to a supporter node system that operates similarly.

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Accordingly, a portable wireless device, such as the client node, may save power by operating in a lower-power state except, as recited in some of the claims, when transmitting the wakeup notification message and when receiving buffered data. As further recited in claims 3, 9, 23, 25 and 27, the transitioning from the lower-power state to the higher-power state and the transmitting the wakeup notification message are performed independently of beacon transmissions by the supporter node. In this way, the client node does not have to be in a higher-power state to receive beacon transmissions from a supporter node. This is unlike Krantz, as discussed below.

In Krantz, the cited reference, a network interface module (201) of the wireless device 100 sends a message to the AP *only when it already knows data is available* for the network interface module (201). [See Krantz, paragraph 0050, lines 1-4] In Krantz, the wireless device must *first* receive a beacon that informs the device that data is available [See Krantz, paragraph 0048 lines 1-9]. In Krantz, the wireless device 100 wakes up to receive beacons [See Krantz, paragraph 0048 lines 1-9]. Furthermore, in

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Krantz, the wireless device must inform the access point that it is entering a doze state [See Krantz, paragraph 49, lines 3-6].

In view of the above, Applicant's independent claims 1, 7, 21, 24 and 26 are believed to be allowable over the Krantz and that the rejection of claims 1 - 12 and 21 - 25 under 35 U.S.C. § 102(e) has been overcome.

Applicants further submit that the there would be no motivation to combine Krantz with one or more other references to result in Applicant's claimed invention because Krantz's wireless devices rely on receipt of beacons to determine whether or not data is available. Applicant's client node as recited in the amended claims, on the other hand, does not rely on receipt of beacon transmissions by the supporter node, but uses a wakeup notification message transmitted to the supporter node. Furthermore, Applicant's claims 3, 9, 23, 25 and 27 recite that the wakeup notification is independent of beacon transmissions. In view of this, Applicant submits that the rejection under 35 U.S.C. § 103(a) has also bee overcome.

New claims 28, 31, 34 and 37 further distinguish over Krantz by reciting that the client node uses two or more antennas implementing spatial diversity to receive the buffered data from the supporter node. Applicant finds no teaching, suggestion or motivation in Krantz of this.

New claims 29, 30, 32, 33, 35, 36, 38 and 39 further distinguish over Krantz by reciting that a power save message is sent from the supporter node to the client node in response to the wakeup notification message. The power save message instructs the client node to transition back to the lower-power state when the supporter node is servicing one or more other client nodes and is unable to transmit buffered data to the client node. This further reduces the power consumption of a client node. Applicant finds no teaching, suggestion or motivation in Krantz of this. New claims 30, 33, 36 and 38 further recite that the power save message indicates a time in the future when the client node is to transmit another wakeup notification message to receive buffered data and that the supporter node estimates a duration to complete the services of the one or more other

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client nodes to determine the time in the future. Applicant finds no teaching, suggestion or motivation in Krantz of this.

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#### Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Greg Gorrie at (480) 659-3314, or Applicant's below-named representative to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

**DUNCAN KITCHEN** 

By his Representatives, SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. Attorneys for Intel Corporation P.O. Box 2938 Minneapolis, Minnesota 55402 (612) 349-9592

Date Dec. 14, 2005

Ann M. McCrackin

Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 14th day of December 2005.

Name

Signature